

**Notice of Allowability**

Application No.

10/798,353

Applicant(s)

KAWAGISHI ET AL.

Examiner

Art Unit

Jaworski Francis J.

3768

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amdt 6-14-07.
2. ☒ The allowed claim(s) is/are 1 - 8 and 18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 2/21/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Francis J. Jaworski  
Primary Examiner

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Telephone notification was provided to Eckhardt Kuesters, Reg. No. 28,270 and Surinder Sachar, Reg. No. 34,423 of the cancellation of those claims which were non-elected with traverse in the response filed on September 18, 2006, without prejudice towards the filing of a divisional application.

The application has been amended as follows:

Claims 9 – 17 and 19 – 20 have been cancelled.

The following is an examiner's statement of reasons for allowance:

1) With respect to the IDS filed on February 21, 2007 the submissions have been lined through insofar as the first entry is to the serial No. of this case and the second application , 11/562,234 was reviewed for the content of its current claims and no category of double-patenting conflict was considered to exist.

2) The following additional art is cited as of interest in order to complete the record: D'Angelo US5521882, Tsao et al US6458084, Kino US3816753 and Fukukita et al US4844082.

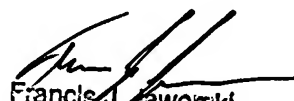
Of these, Fukukita et al is similar enough to warrant discussion of distinctions. In Fukukita et al, first and second ultrasound pulses are simultaneously transmitted at differing frequencies and considerable attention is paid in the disclosure to phase control of the second pulse with respect to the first in order that the nonlinear harmonic effect be emphasized and measured accurately, and there is an inference of imaging application per the prior art discussion of Fig. 1 as framing a field of use. However in the examples given in Fukukita et al, the first pulse is a pump pulse provided by a device portion adapted to provide a wave of much lower frequency and higher amplitude than the second pulse, the 'pump' wave serving as a carrier for the pulse wave in order to deliver the pulse in an amplitude range in which the non-linear effect is pronounced. As such, in the two examples given the pump pulse is between 5 and 10% of the frequency of the second pulse, for example .3 vs 3 and .5 versus 7.5 Mhz, and the second pulse is phased in order to maximize the echo effect at the second harmonic. Such a system and method would not have adaptation to generate an imageable interaction effect between the second harmonic and the difference frequency between the first and second pulses and no such effect is sought, apart from the fact that no image is produced.

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The drawing correction sheets provided 6/14/07 have been APPROVED by the Examiner.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

  
Francis J. Jaworski  
Primary Examiner

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